12 CHARRED DOCUMENT EXAMINATIONS

12.1 Objective

To decipher texts on charred documents.

12.2 References

- Conway, James V.P.; Evidential Documents; Charles C. Thomas Publisher, 1959
- Harrison, Wilson R.; Suspect Documents (Second Edition); Sweet & Maxwell Ltd., 1966
- Ellen, David; The Scientific Examination of Documents (Second Edition); Taylor & Francis Ltd., 1997
- Hilton, Ordway; Scientific Examination of Questioned Documents (Revised Edition); Elsevier, 1982
- Saferstein, Richard; Criminalistics, An Introduction to Forensic Science; Prentice-Hall Inc., 1977
- Richards, G.B., "The Application of Electronic Video Techniques to Infrared and Ultraviolet Examinations", JFS, Vol. 22, No. 1, 1977

12.2 Equipment

- Light source
- Stereo microscope
- magnifier
- UV light source
- VSC-2000 Video Spectral Comparator
- DOYA IR Video Analyzer

12.3 Safety Measures

Precautionary measures specified in Section 1.3 when working with a UV light source.

12.4 Procedures

12.4.1 These procedures may not address all aspects of any uncommon or unusual circumstances that may be encountered during examinations.

12.4.2 The procedures outlined below may not be possible or necessary in every case.

12.4.3 Conduct examination in a low traffic area, relatively free of air currents.

12.4.4 If necessary, moisturize the document.

12.4.5 Conduct visual exam using natural and/or artificial lighting. Vary the angle at which the light reflects off the paper in an effort to contrast any text (e.g. handwriting, typewriting) against the charred background.

12.4.6 Conduct microscopic examination. If available, polarizing filters should be used.

12.4.7 Examine with UV light source (long and short wave).

12.4.8 Examine with the VSC-2000. Evaluate the significance of results in the IR absorbance, reflectance, and luminescent properties; as well as those detected utilizing the UV light source. (**Note**: The DOYA IR Analyzer may also be used, especially in cases where the size or shape of the documents is such that the open architecture of the DOYA is necessary. Although there will undoubtedly be situations where either instrument will provide adequate results, the VSC-2000 has a broader range of capabilities, and for this reason should be the initial instrument of choice. Charred documents which cannot be deciphered on the DOYA shall be examined on the VSC-2000 (if possible) before reporting any conclusions on the CoA.)

12.4.9 Examine with laser or other type of alternate light source with various filters (if available).

12.4.10 If possible, prepare a permanent record (photograph or similar type reproduction) depicting any significant results obtained.

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